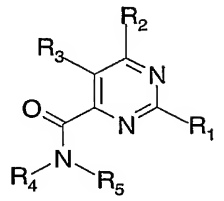
CLAIMS

1. The use of a compound of formula (1):



(I)

wherein

R_1 is H or NH_2;

R_2 is optionally substituted aryl or heteroaryl attached via a carbon atom;

R_3 is H; optionally substituted C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, or C_3-C_7 cycloalkyl, halogen; OH or OR_{10};

R_4 is H, optionally substituted C_1-C_6alkyl, C_3-C_6alkenyl, C_3-C_6alkynyl, C_3-C_7 cycloalkyl, aryl or heteroaryl,

R_5 is H or optionally substituted C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, or C_3-C_7 cycloalkyl; or R_4 and R_5 together form a 5 or 6-membered heterocyclic ring;

R_{10} is optionally substituted C_1-C_6alkyl;

and pharmaceutically acceptable salts and prodrugs thereof, in the manufacture of a medicament for the treatment or prevention of a disorder in which the blocking of purine receptors is beneficial, PROVIDED THAT when R_2 is optionally substituted aryl the said use is not the manufacture of a medicament for the treatment or prevention of inflammatory pain.

2. The use as claimed in claim 1 wherein R_2 is optionally substituted phenyl.

3. The use as claimed in claim 1 wherein R_2 is optionally substituted monocyclic or bicyclic heteroaryl.

4. The use as claimed in claim 1 wherein R_2 is optionally substituted furyl, thienyl, thiazolyl, oxazolyl, imidazolyl, pyridyl, indolyl or benzofuranyl.

5. The use as claimed in any of the preceding claims wherein optional substituents present in R_2 are selected from C_1-C_3 alkyl, C_1-C_3 alkoxy and carboxamide groups.

6. The use as claimed in any of claims 1 to 4 wherein optional substituents present in R_2 are selected from methyl, ethyl, methoxy, ethoxy, cyano, chloro, bromo, fluoro, trifluoromethyl, and carboxamide groups $-CONR^AR^B$ where R^A and R^B are independently hydrogen, methyl or ethyl.

7. The use as claimed in claim 1 wherein R_2 is 2-furyl, 5-methyl-2-furyl, 2-thiazolyl, 4-methyl-2-thiazolyl, phenyl, 3-cyano-phenyl, or o-methyl-phenyl.

8. The use as claimed in any of the preceding claims wherein R_3 is H, C_1-C_6alkyl, C_3-C_6 cycloalkyl, halo substituted C_1-C_6alkyl, or halogen.

9. The use as claimed in any of claims 1 to 7 wherein R_3 is H, methyl, ethyl, n- or isopropyl, cyclopropyl, n-, sec- or tert-butyl, trifloromethyl, chloro, bromo or fluoro.

10. The use as claimed in any of the preceding claims wherein R_4 is C_1-C_6alkyl, substituted by aryl or heteroaryl, the said aryl or heteroaryl ring being optionally substituted.

11. The use as claimed in any of claims 1 to 9 wherein R_4 is arylmethyl or heteroarylmethyl, the said aryl or heteroaryl ring being optionally substituted.

12. The use as claimed in any of the preceding claims wherein R_4 is aryl or heteroaryl or includes an aryl or heteroaryl ring, said ring being selected from optionally substituted phenyl, pyridyl, furanyl, thienyl, isoxazolyl, thiazolyl, pyrrolyl, imidazolyl, pyrazolyl, pyrazinyl, pyrimidinyl, benzimidazolyl, indolyl, benzthiazolyl, benzthiadiazolyl, quinolyl, and isoquinolyl.

13. The use as claimed in any of claims 1 to 9 wherein R_4 is aryl or heteroaryl or includes an aryl or heteroaryl ring, said ring being selected from optionally substituted phenyl, pyridyl, imidazolyl, pyrazolyl, and isoxazolyl.

14. The use as claimed in any of claims 10 to 13 wherein optional substituents of R_4 are selected from C_1-C_6 alkyl, C_1-C_3 alkoxy, C_1-C_3 alkoxy-(C_1-C_3 alkyl)-, chloro, bromo, fluoro, trifluoromethyl, $-NR^AR^B$, $-CONR^AR^B$, $-NR^ACOR^B$ where R^A and R^B are independently hydrogen or C_1-C_3 alkyl or together form an optionally substituted 5 or 6-membered heterocyclic ring.

15. The use as claimed in any of the preceding claims wherein R_5 is hydrogen.

16. The use as claimed in any of claims 1 to 9 wherein R_4 and R_5 taken together with the nitrogen to which they are attached form a saturated 5 or 6-membered heterocyclic ring, optionally benzo-fused.

17. The use as claimed in any of claims 1 to 9 wherein R_4 and R_5 taken together with the nitrogen to which they are attached form a dihydroindolyl, dihydroisoindolyl, tetrahydroquinolinyl or tetrahydroisoquinolinyl ring system.

18. A method of treating or preventing a disorder in which the blocking of purine receptors is beneficial, the method comprising administration to a subject in need of such treatment an effective dose of a compound of formula (I) as set out in any of claims 1 to 17 or a pharmaceutically acceptable salt or prodrug thereof.

19. A compound of formula (I) as defined in any of claims 1 to 17, PROVIDED THAT: (a) R_2 is not an optionally substituted pyrazolopyridine ring system; and (b) when R_1 and R_3 are hydrogen and R_2 is unsubstituted phenyl then $-NR_4R_5$ is not $-NH_2$, $NHCH_3$ or $-N(CH_3)_2$; and (c) when R_1 is $-NH_2$ and R_3 is hydrogen, then R_2 is not phenyl or phenyl substituted by one or more substituents selected from halogen, hydroxy, C_1-C_6 alkyl, C_1-C_6 alkoxy, nitro, $-NH_2$, or $-NHCOCH_3$.

20. A compound as claimed in claim 19 wherein R_1 is $-NH_2$ and R_3 is hydrogen, and R_2 is substituted phenyl, the substituent(s) in the phenyl being selected from, methylenedioxy, C_1-C_6 alkylthio, trifluromethyl, trifluoromethoxy, nitrile (-CN), oxo, COR^A, $-CONHR^A$, $-CONR^AR^B$, $-NHR^A$, NR^AR^B, $-NHCOR^C$, $-NHCOOR^A$, $-NR^BCOOR^A$ wherein R^A and R^B are independently a C_1-C_6 alkyl group and wherein R^C is a C_2-C_6 alkyl group.

21. A compound as claimed in claim 19 wherein the compound is selected from any of the compounds as shown in Table 1.

22. For use in therapy a compound as claimed in any of claims 19 to 21.

23. A pharmaceutical composition comprising a compound as claimed in any of claims 19 to 21 in combination with a pharmaceutically acceptable carrier or excipients.

24. A use as claimed in any of claims 1 to 17 or a method as claimed in claim 18 wherein said receptors are adenosine receptors.

25. A use as claimed in any of claims 1 to 17 or a method as claimed in claim 18 wherein said receptors are adenosine A_{2A} receptors.

26. A use as claimed in any of claims 1 to 17 or a method as claimed in claim 18 wherein the disorders are selected from movement disorders; acute and chronic pain other than inflammatory pain; anxiety disorders, affective disorders; central and peripheral nervous system degenerative disorders; schizophrenia; cognitive and memory impairment disorders; attention disorders; central nervous system injury; cerebral ischaemia; myocardial ischaemia; muscle ischaemia; sleep disorders; eye disorders; cardiovascular disorders; and diabetes.

27. A use or method as claimed in claim 26 wherein the movement disorder is selected from Parkinson's disease, progressive supernuclear palsy, Huntingtons disease, multiple system atrophy, corticobasal degeneration, Wilsons disease, Hallerrorden-Spatz disease, progressive pallidal atrophy, Dopa-responsive dystonia-Parkinsonism and spasticity.

28. A use or method as claimed in claim 26 or claim 27, wherein the disorder is a movement disorder and the compound of formula (I) is used or administered together with L-DOPA or a dopamine agonist.

29. A use or method as claimed in claim 26 wherein the anxiety disorder is selected from panic disorder, agorophobia, obsessive compulsive disorder, social phobia, post traumatic stress disorder, generalised anxiety disorder and specific phobia.

30. A use or method as claimed in claim 26 or claim 27 wherein the disorder is pain.

31. A use or method as claimed in claim 26 or claim 27 wherein the disorder is neuropathic pain.

32. A use or method as claimed in claim 26 wherein said affective disorder is selected from bipolar disorder, seasonal affective disorder, depression, manic depression, atypical depression and monodepressive disease.

33. A use or method as claimed in claim 26 wherein said central and peripheral nervous system degenerative disorder is selected from corticobasal degeneration, demyelinating disease, Freidrich's ataxia, motoneurone disease, multiple system atrophy, myelopathy, radiculopathy, peripheral neuropathy, systemic lupus erythamatosis, granulomatous disease, olivo-ponto-cerebellar atrophy, progressive pallidal atrophy, progressive supranuclear palsy and spasticity.

34. A use or method as claimed in claim 26 wherein said cognitive and/or memory impairment disorder is selected from dementia, Alzheimers Disease, Frontotemporal dementia, multi-infarct dementia, AIDS dementia, dementia associated with Huntingtons Disease, Lewy body dementia, senile dementia, age-related memory impairment, cognitive impairment associated with dementia, Korsakoff syndrome and dementia pugilans.

35. A use or method as claimed in claim 26 wherein attention disorder is selected from attention-deficit hyperactivity disorder (ADHD), attention deficit disorder, minimal brain dysfunction, brain-injured child syndrome, hyperkinetic reaction childhood and hyperactive child syndrome.

36. A use or method as claimed in claim 26 wherein said central nervous system injury is selected from traumatic brain injury, surgical trauma, raised intracranial pressure, cerebral oedema, hydrocephalus and spinal cord injury.

37. A use or method as claimed in claim 26 wherein said cerebral ischaemia is transient ischaemic attack, stroke, subarachnoid haemorrhage, cerebral vasospasm, peri-natal asphyxia, drowning, cardiac arrest or subdural haematoma.

38. A use or method as claimed in claim 26 wherein the sleep disorder is selected from hypersomnia, narcolepsy and restless legs syndrome.

39. A use or method as claimed in claim 26 wherein the eye disorder is selected from retinal ischaemia-reperfusion injury and diabetic neuropathy.

40. Use of a compound of formula (I) or a pharmaceutically acceptable salt or prodrug thereof as set forth in any of claims 1 to 17 in the manufacture of a medicament for neuroprotection in a subject.

41. A method of neuroprotection comprising administration to a subject in need of such treatment an effective dose of a compound of formula (I) as set out in any of claims 1 to 17 or a pharmaceutically acceptable salt or prodrug thereof.